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212583.ST25
SEQUENCE LISTING

<110> Nickoloff, Brian
Miele, Lucio

<120> METHOD AND REAGENTS FOR EPITHELIAL BARRIER FORMATION AND TREATMENT
OF MALIGNANT AND BENIGN SKIN DISORDERS BY MODULATING THE NOTCH PATHWAY

<130> 212583

<140> Unassigned

<141> 2001-08-31

<150> US 60/229,614

<151> 2000-08-31

<160> 18

<170> PatentIn version 3.1

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ctg Leu	gac Asp 1430	tac Tyr	agc Ser	ttc Phe	ggg Gly	ggc Gly 1435	ggg Gly	gcc Ala	ggg Gly	cgc Arg	gac Asp 1440	atc Ile	ccc Pro	ccg Pro	4329
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ccc Pro	atg Met 1670	gac Asp	gtc Val	cgc Arg	ggc Gly	tcc Ser 1675	atc Ile	gtc Val	tac Tyr	ctg Leu	gag Glu 1680	att Ile	gac Asp	aac Asn	5049
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cgg	ctg	cag	agc	ggc	atg	gtg	ccg	aac	caa	tac	aac	cct	ctg	cgg	6984
Arg	Leu	Gln	Ser	Gly	Met	Val	Pro	Asn	Gln	Tyr	Asn	Pro	Leu	Arg	
	2315					2320					2325				
ggg	agt	gtg	gca	cca	ggc	ccc	ctg	agc	aca	cag	gcc	ccc	tcc	ctg	7029
Gly	Ser	Val	Ala	Pro	Gly	Pro	Leu	Ser	Thr	Gln	Ala	Pro	Ser	Leu	
	2330					2335					2340				
cag	cat	ggc	atg	gta	ggc	ccg	ctg	cac	agt	agc	ctt	gct	gcc	agc	7074
Gln	His	Gly	Met	Val	Gly	Pro	Leu	His	Ser	Ser	Leu	Ala	Ala	Ser	
	2345					2350					2355				
gcc	ctg	tcc	cag	atg	atg	agc	tac	cag	ggc	ctg	ccc	agc	acc	cgg	7119
Ala	Leu	Ser	Gln	Met	Met	Ser	Tyr	Gln	Gly	Leu	Pro	Ser	Thr	Arg	
	2360					2365					2370				
ctg	gcc	acc	cag	cct	cac	ctg	gtg	cag	acc	cag	cag	gtg	cag	cca	7164
Leu	Ala	Thr	Gln	Pro	His	Leu	Val	Gln	Thr	Gln	Gln	Val	Gln	Pro	
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caa	aac	tta	cag	atg	cag	cag	cag	aac	ctg	cag	cca	gca	aac	atc	7209
Gln	Asn	Leu	Gln	Met	Gln	Gln	Gln	Asn	Leu	Gln	Pro	Ala	Asn	Ile	
	2390					2395					2400				
cag	cag	cag	caa	agc	ctg	cag	ccg	cca	cca	cca	cca	cca	cag	ccg	7254
Gln	Gln	Gln	Gln	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Pro	Pro	Gln	Pro	
	2405					2410					2415				
cac	ctt	ggc	gtg	agc	tca	gca	gcc	agc	ggc	cac	ctg	ggc	cgg	agc	7299
His	Leu	Gly	Val	Ser	Ser	Ala	Ala	Ser	Gly	His	Leu	Gly	Arg	Ser	
	2420					2425					2430				
ttc	ctg	agt	gga	gag	ccg	agc	cag	gca	gac	gtg					7332
Phe	Leu	Ser	Gly	Glu	Pro	Ser	Gln	Ala	Asp	Val					
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<211> 2444

<212> PRT

<213> Artificial Sequence

<220>

<221> misc_feature

<222> (891)..(891)

<223> The 'Xaa' at location 891 stands for Gly, or Ala.

<220>

<221> misc_feature

<222> (1763)..(1763)

<223> The 'Xaa' at location 1763 stands for Gln, Arg, Pro, or Leu.

<220>

<221> misc_feature

<222> (1787)..(1787)

<223> The 'xaa' at location 1787 stands for Thr, Ala, Pro, or Ser.

<220>

<223> Constitutively Active Notch-1

<400> 2

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Leu Ala Ala Arg Gly Pro Arg Cys Ser Gln Pro Gly Glu Thr Cys Leu
20 25 30

Asn Gly Gly Lys Cys Glu Ala Ala Asn Gly Thr Glu Ala Cys Val Cys
35 40 45

Gly Gly Ala Phe Val Gly Pro Arg Cys Gln Asp Pro Asn Pro Cys Leu
50 55 60

Ser Thr Pro Cys Lys Asn Ala Gly Thr Cys His Val Val Asp Arg Arg
65 70 75 80

Gly Val Ala Asp Tyr Ala Cys Ser Cys Ala Leu Gly Phe Ser Gly Pro
85 90 95

Leu Cys Leu Thr Pro Leu Asp Asn Ala Cys Leu Thr Asn Pro Cys Arg
100 105 110

Asn Gly Gly Thr Cys Asp Leu Leu Thr Leu Thr Glu Tyr Lys Cys Arg
115 120 125

Cys Pro Pro Gly Trp Ser Gly Lys Ser Cys Gln Gln Ala Asp Pro Cys
130 135 140

Ala Ser Asn Pro Cys Ala Asn Gly Gly Gln Cys Leu Pro Phe Glu Ala
145 150 155 160

Ser Tyr Ile Cys His Cys Pro Pro Ser Phe His Gly Pro Thr Cys Arg
165 170 175

Gln Asp Val Asn Glu Cys Gly Gln Lys Pro Arg Leu Cys Arg His Gly
180 185 190

Gly Thr Cys His Asn Glu Val Gly Ser Tyr Arg Cys Val Cys Arg Ala
195 200 205

Thr His Thr Gly Pro Asn Cys Glu Arg Pro Tyr Val Pro Cys Ser Pro
210 215 220

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Ser Pro Cys Leu His Asn Gly Arg Cys Leu Asp Lys Ile Asn Glu Phe
500 505 510

Gln Cys Glu Cys Pro Thr Gly Phe Thr Gly His Leu Cys Gln Tyr Asp
515 520 525

Val Asp Glu Cys Ala Ser Thr Pro Cys Lys Asn Gly Ala Lys Cys Leu
530 535 540

Asp Gly Pro Asn Thr Tyr Thr Cys Val Cys Thr Glu Gly Tyr Thr Gly
545 550 555 560

Thr His Cys Glu Val Asp Ile Asp Glu Cys Asp Pro Asp Pro Cys His
565 570 575

Tyr Gly Ser Cys Lys Asp Gly Val Ala Thr Phe Thr Cys Leu Cys Arg
580 585 590

Pro Gly Tyr Thr Gly His His Cys Glu Thr Asn Ile Asn Glu Cys Ser
595 600 605

Ser Gln Pro Cys Arg Leu Arg Gly Thr Cys Gln Asp Pro Asp Asn Ala
610 615 620

Tyr Leu Cys Phe Cys Leu Lys Gly Thr Thr Gly Pro Asn Cys Glu Ile
625 630 635 640

Asn Leu Asp Asp Cys Ala Ser Ser Pro Cys Asp Ser Gly Thr Cys Leu
645 650 655

Asp Lys Ile Asp Gly Tyr Glu Cys Ala Cys Glu Pro Gly Tyr Thr Gly
660 665 670

Ser Met Cys Asn Ser Asn Ile Asp Glu Cys Ala Gly Asn Pro Cys His
675 680 685

Asn Gly Gly Thr Cys Glu Asp Gly Ile Asn Gly Phe Thr Cys Arg Cys
690 695 700

Pro Glu Gly Tyr His Asp Pro Thr Cys Leu Ser Glu Val Asn Glu Cys
705 710 715 720

Asn Ser Asn Pro Cys Val His Gly Ala Cys Arg Asp Ser Leu Asn Gly
725 730 735

Tyr Lys Cys Asp Cys Asp Pro Gly Trp Ser Gly Thr Asn Cys Asp Ile
740 745 750

Asn Asn Asn Glu Cys Glu Ser Asn Pro Cys Val Asn Gly Gly Thr Cys
755 760 765

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Lys Asp Met Thr Ser Gly Ile Val Cys Thr Cys Arg Glu Gly Phe Ser
770 775 780

Gly Pro Asn Cys Gln Thr Asn Ile Asn Glu Cys Ala Ser Asn Pro Cys
785 790 795 800

Leu Asn Lys Gly Thr Cys Ile Asp Asp Val Ala Gly Tyr Lys Cys Asn
805 810 815

Cys Leu Leu Pro Tyr Thr Gly Ala Thr Cys Glu Val Val Leu Ala Pro
820 825 830

Cys Ala Pro Ser Pro Cys Arg Asn Gly Gly Glu Cys Arg Gln Ser Glu
835 840 845

Asp Tyr Glu Ser Phe Ser Cys Val Cys Pro Thr Ala Gly Ala Lys Gly
850 855 860

Gln Thr Cys Glu Val Asp Ile Asn Glu Cys Val Leu Ser Pro Cys Arg
865 870 875 880

His Gly Ala Ser Cys Gln Asn Thr His Gly Xaa Tyr Arg Cys His Cys
885 890 895

Gln Ala Gly Tyr Ser Gly Arg Asn Cys Glu Thr Asp Ile Asp Asp Cys
900 905 910

Arg Pro Asn Pro Cys His Asn Gly Gly Ser Cys Thr Asp Gly Ile Asn
915 920 925

Thr Ala Phe Cys Asp Cys Leu Pro Gly Phe Arg Gly Thr Phe Cys Glu
930 935 940

Glu Asp Ile Asn Glu Cys Ala Ser Asp Pro Cys Arg Asn Gly Ala Asn
945 950 955 960

Cys Thr Asp Cys Val Asp Ser Tyr Thr Cys Thr Cys Pro Ala Gly Phe
965 970 975

Ser Gly Ile His Cys Glu Asn Asn Thr Pro Asp Cys Thr Glu Ser Ser
980 985 990

Cys Phe Asn Gly Gly Thr Cys Val Asp Gly Ile Asn Ser Phe Thr Cys
995 1000 1005

Leu Cys Pro Pro Gly Phe Thr Gly Ser Tyr Cys Gln His Val Val
1010 1015 1020

Asn Glu Cys Asp Ser Arg Pro Cys Leu Leu Gly Gly Thr Cys Gln
1025 1030 1035

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Asp Gly Arg Gly Leu His Arg Cys Thr Cys Pro Gln Gly Tyr Thr
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 Cys Lys Asn Gly Gly Lys Cys Trp Gln Thr His Thr Gln Tyr Arg
 1070 1075 1080
 Cys Glu Cys Pro Ser Gly Trp Thr Gly Leu Tyr Cys Asp Val Pro
 1085 1090 1095
 Ser Val Ser Cys Glu Val Ala Ala Gln Arg Gln Gly Val Asp Val
 1100 1105 1110
 Ala Arg Leu Cys Gln His Gly Gly Leu Cys Val Asp Ala Gly Asn
 1115 1120 1125
 Thr His His Cys Arg Cys Gln Ala Gly Tyr Thr Gly Ser Tyr Cys
 1130 1135 1140
 Glu Asp Leu Val Asp Glu Cys Ser Pro Ser Pro Cys Gln Asn Gly
 1145 1150 1155
 Ala Thr Cys Thr Asp Tyr Leu Gly Gly Tyr Ser Cys Lys Cys Val
 1160 1165 1170
 Ala Gly Tyr His Gly Val Asn Cys Ser Glu Glu Ile Asp Glu Cys
 1175 1180 1185
 Leu Ser His Pro Cys Gln Asn Gly Gly Thr Cys Leu Asp Leu Pro
 1190 1195 1200
 Asn Thr Tyr Lys Cys Ser Cys Pro Arg Gly Thr Gln Gly Val His
 1205 1210 1215
 Cys Glu Ile Asn Val Asp Asp Cys Asn Pro Pro Val Asp Pro Val
 1220 1225 1230
 Ser Arg Ser Pro Lys Cys Phe Asn Asn Gly Thr Cys Val Asp Gln
 1235 1240 1245
 Val Gly Gly Tyr Ser Cys Thr Cys Pro Pro Gly Phe Val Gly Glu
 1250 1255 1260
 Arg Cys Glu Gly Asp Val Asn Glu Cys Leu Ser Asn Pro Cys Asp
 1265 1270 1275
 Ala Arg Gly Thr Gln Asn Cys Val Gln Arg Val Asn Asp Phe His
 1280 1285 1290

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Cys Glu 1295 Cys Arg Ala Gly His 1300 Thr Gly Arg Arg Cys 1305 Glu Ser Val
 Ile Asn 1310 Gly Cys Lys Gly Lys 1315 Pro Cys Lys Asn Gly 1320 Gly Thr Cys
 Ala Val 1325 Ala Ser Asn Thr Ala 1330 Arg Gly Phe Ile Cys 1335 Lys Cys Pro
 Ala Gly 1340 Phe Glu Gly Ala Thr 1345 Cys Glu Asn Asp Ala 1350 Arg Thr Cys
 Gly Ser 1355 Leu Arg Cys Leu Asn 1360 Gly Gly Thr Cys Ile 1365 Ser Gly Pro
 Arg Ser 1370 Pro Thr Cys Leu Cys 1375 Leu Gly Pro Phe Thr 1380 Gly Pro Glu
 Cys Gln 1385 Phe Pro Ala Ser Ser 1390 Pro Cys Leu Gly Gly 1395 Asn Pro Cys
 Tyr Asn 1400 Gln Gly Thr Cys Glu 1405 Pro Thr Ser Glu Ser 1410 Pro Phe Tyr
 Arg Cys 1415 Leu Cys Pro Ala Lys 1420 Phe Asn Gly Leu Leu 1425 Cys His Ile
 Leu Asp 1430 Tyr Ser Phe Gly Gly 1435 Gly Ala Gly Arg Asp 1440 Ile Pro Pro
 Pro Leu 1445 Ile Glu Glu Ala Cys 1450 Glu Leu Pro Glu Cys 1455 Gln Glu Asp
 Ala Gly 1460 Asn Lys Val Cys Ser 1465 Leu Gln Cys Asn Asn 1470 His Ala Cys
 Gly Trp 1475 Asp Gly Gly Asp Cys 1480 Ser Leu Asn Phe Asn 1485 Asp Pro Trp
 Lys Asn 1490 Cys Thr Gln Ser Leu 1495 Gln Cys Trp Lys Tyr 1500 Phe Ser Asp
 Gly His 1505 Cys Asp Ser Gln Cys 1510 Asn Ser Ala Gly Cys 1515 Leu Phe Asp
 Gly Phe 1520 Asp Cys Gln Arg Ala 1525 Glu Gly Gln Cys Asn 1530 Pro Leu Tyr
 Asp Gln 1535 Tyr Cys Lys Asp His 1540 Phe Ser Asp Gly His 1545 Cys Asp Gln

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Gly Ala 1805 Leu Met Asp Asp Asn 1810 Gln Asn Glu Trp Gly 1815 Asp Glu Asp
 Leu Glu 1820 Thr Lys Lys Phe Arg 1825 Phe Glu Glu Pro Val 1830 Val Leu Pro
 Asp Leu 1835 Asp Asp Gln Thr Asp 1840 His Arg Gln Trp Thr 1845 Gln Gln His
 Leu Asp 1850 Ala Ala Asp Leu Arg 1855 Met Ser Ala Met Ala 1860 Pro Thr Pro
 Pro Gln 1865 Gly Glu Val Asp Ala 1870 Asp Cys Met Asp Val 1875 Asn Val Arg
 Gly Pro 1880 Asp Gly Phe Thr Pro 1885 Leu Met Ile Ala Ser 1890 Cys Ser Gly
 Gly Gly 1895 Leu Glu Thr Gly Asn 1900 Ser Glu Glu Glu Glu 1905 Asp Ala Pro
 Ala Val 1910 Ile Ser Asp Phe Ile 1915 Tyr Gln Gly Ala Ser 1920 Leu His Asn
 Gln Thr 1925 Asp Arg Thr Gly Glu 1930 Thr Ala Leu His Leu 1935 Ala Ala Arg
 Tyr Ser 1940 Arg Ser Asp Ala Ala 1945 Lys Arg Leu Leu Glu 1950 Ala Ser Ala
 Asp Ala 1955 Asn Ile Gln Asp Asn 1960 Met Gly Arg Thr Pro 1965 Leu His Ala
 Ala Val 1970 Ser Ala Asp Ala Gln 1975 Gly Val Phe Gln Ile 1980 Leu Ile Arg
 Asn Arg 1985 Ala Thr Asp Leu Asp 1990 Ala Arg Met His Asp 1995 Gly Thr Thr
 Pro Leu 2000 Ile Leu Ala Ala Arg 2005 Leu Ala Val Glu Gly 2010 Met Leu Glu
 Asp Leu 2015 Ile Asn Ser His Ala 2020 Asp Val Asn Ala Val 2025 Asp Asp Leu
 Gly Lys 2030 Ser Ala Leu His Trp 2035 Ala Ala Ala Val Asn 2040 Asn Val Asp
 Ala Ala 2045 Val Val Leu Leu Lys 2050 Asn Gly Ala Asn Lys 2055 Asp Met Gln

SECRET

Asn 2060	Arg	Glu	Glu	Thr	Pro 2065	Leu	Phe	Leu	Ala	Ala 2070	Arg	Glu	Gly	
Ser 2075	Tyr	Glu	Thr	Ala	Lys	Val 2080	Leu	Leu	Asp	His	Phe 2085	Ala	Asn	Arg
Asp 2090	Ile	Thr	Asp	His	Met	Asp 2095	Arg	Leu	Pro	Arg	Asp 2100	Ile	Ala	Gln
Glu 2105	Arg	Met	His	His	Asp	Ile 2110	Val	Arg	Leu	Leu	Asp 2115	Glu	Tyr	Asn
Leu 2120	Val	Arg	Ser	Pro	Gln	Leu 2125	His	Gly	Ala	Pro	Leu 2130	Gly	Gly	Thr
Pro 2135	Thr	Leu	Ser	Pro	Pro	Leu 2140	Cys	Ser	Pro	Asn	Gly 2145	Tyr	Leu	Gly
Ser 2150	Leu	Lys	Pro	Gly	Val	Gln 2155	Gly	Lys	Lys	Val	Arg 2160	Lys	Pro	Ser
Ser 2165	Lys	Gly	Leu	Ala	Cys	Gly 2170	Ser	Lys	Glu	Ala	Lys 2175	Asp	Leu	Lys
Ala 2180	Arg	Arg	Lys	Lys	Ser	Gln 2185	Asp	Gly	Lys	Gly	Cys 2190	Leu	Leu	Asp
Ser 2195	Ser	Gly	Met	Leu	Ser	Pro 2200	Val	Asp	Ser	Leu	Glu 2205	Ser	Pro	His
Gly 2210	Tyr	Leu	Ser	Asp	Val	Ala 2215	Ser	Pro	Pro	Leu	Leu 2220	Pro	Ser	Pro
Phe 2225	Gln	Gln	Ser	Pro	Ser	Val 2230	Pro	Leu	Asn	His	Leu 2235	Pro	Gly	Met
Pro 2240	Asp	Thr	His	Leu	Gly	Ile 2245	Gly	His	Leu	Asn	Val 2250	Ala	Ala	Lys
Pro 2255	Glu	Met	Ala	Ala	Leu	Gly 2260	Gly	Gly	Gly	Arg	Leu 2265	Ala	Phe	Glu
Thr 2270	Gly	Pro	Pro	Arg	Leu	Ser 2275	His	Leu	Pro	Val	Ala 2280	Ser	Gly	Thr
Ser 2285	Thr	Val	Leu	Gly	Ser	Ser 2290	Ser	Gly	Gly	Ala	Leu 2295	Asn	Phe	Thr
Val 2300	Gly	Gly	Ser	Thr	Ser	Leu 2305	Asn	Gly	Gln	Cys	Glu 2310	Trp	Leu	Ser

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Arg Leu Gln Ser Gly Met Val Pro Asn Gln Tyr Asn Pro Leu Arg
2315 2320 2325

Gly Ser Val Ala Pro Gly Pro Leu Ser Thr Gln Ala Pro Ser Leu
2330 2335 2340

Gln His Gly Met Val Gly Pro Leu His Ser Ser Leu Ala Ala Ser
2345 2350 2355

Ala Leu Ser Gln Met Met Ser Tyr Gln Gly Leu Pro Ser Thr Arg
2360 2365 2370

Leu Ala Thr Gln Pro His Leu Val Gln Thr Gln Gln Val Gln Pro
2375 2380 2385

Gln Asn Leu Gln Met Gln Gln Gln Asn Leu Gln Pro Ala Asn Ile
2390 2395 2400

Gln Gln Gln Gln Ser Leu Gln Pro Pro Pro Pro Pro Pro Gln Pro
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His Leu Gly Val Ser Ser Ala Ala Ser Gly His Leu Gly Arg Ser
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Phe Leu Ser Gly Glu Pro Ser Gln Ala Asp Val
2435 2440

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Gly Gln Phe Glu Leu Glu Ile Leu Ser Met Gln Asn Val Asn Gly Glu
35 40 45

Leu Gln Asn Gly Asn Cys Cys Gly Gly Ala Arg Asn Pro Gly Asp Arg
50 55 60

Lys Cys Thr Arg Asp Glu Cys Asp Thr Tyr Phe Lys Val Cys Leu Lys
65 70 75 80

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Glu Tyr Gln Ser Arg Val Thr Ala Gly Gly Pro Cys Ser Phe Gly Ser
85 90 95

Gly Ser Thr Pro Val Ile Gly Gly Asn Thr Phe Asn Leu Lys Ala Ser
100 105 110

Arg Gly Asn Asp Arg Asn Arg Ile Val Leu Pro Phe Ser Phe Ala Trp
115 120 125

Pro Arg Ser Tyr Thr Leu Leu Val Glu Ala Trp Asp Ser Ser Asn Asp
130 135 140

Thr Val Gln Pro Asp Ser Ile Ile Glu Lys Ala Ser His Ser Gly Met
145 150 155 160

Ile Asn Pro Ser Arg Gln Trp Gln Thr Leu Lys Gln Asn Thr Gly Val
165 170 175

Ala His Phe Glu Tyr Gln Ile Arg Val Thr Cys Asp Asp Tyr Tyr Tyr
180 185 190

Gly Phe Gly Cys Asn Lys Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly
195 200 205

His Tyr Ala Cys Asp Gln Asn Gly Asn Lys Thr Cys Met Glu Gly Trp
210 215 220

Met Gly Pro Glu Cys Asn Arg Ala Ile Cys Arg Gln Gly Cys Ser Pro
225 230 235 240

Lys His Gly Ser Cys Lys Leu Pro Gly Asp Cys Arg Cys Gln Tyr Gly
245 250 255

Trp Gln Gly Leu Tyr Cys Asp Lys Cys Ile Pro His Pro Gly Cys Val
260 265 270

His Gly Ile Cys Asn Glu Pro Trp Gln Cys Leu Cys Glu Thr Asn Trp
275 280 285

Gly Gly Gln Leu Cys Asp Lys Asp Leu Asn Tyr Cys Gly Thr His Gln
290 295 300

Pro Cys Leu Asn Gly Gly Thr Cys Ser Asn Thr Gly Pro Asp Lys Tyr
305 310 315 320

Gln Cys Ser Cys Pro Glu Gly Tyr Ser Gly Pro Asn Cys Glu Ile Ala
325 330 335

Glu His Ala Cys Leu Ser Asp Pro Cys His Asn Arg Gly Ser Cys Lys
340 345 350

Glu Thr Ser₃₅₅ Leu Gly Phe Glu Cys₃₆₀ Glu Cys Ser Pro Gly₃₆₅ Trp Thr Gly

Pro Thr₃₇₀ Cys Ser Thr Asn Ile₃₇₅ Asp Asp Cys Ser Pro Asn Asn Cys Ser

His Gly Gly Thr Cys Gln₃₉₀ Asp Leu Val Asn Gly₃₉₅ Phe Lys Cys Val Cys₄₀₀

Pro Pro Gln Trp Thr₄₀₅ Gly Lys Thr Cys Gln₄₁₀ Leu Asp Ala Asn Glu₄₁₅ Cys

Glu Ala Lys Pro₄₂₀ Cys Val Asn Ala Lys₄₂₅ Ser Cys Lys Asn Leu₄₃₀ Ile Ala

Ser Tyr Tyr₄₃₅ Cys Asp Cys Leu Pro₄₄₀ Gly Trp Met Gly Gln₄₄₅ Asn Cys Asp

Ile Asn Ile Asn Asp Cys Leu₄₅₅ Gly Gln Cys Gln Asn₄₆₀ Asp Ala Ser Cys

Arg Asp Leu Val Asn Gly₄₇₀ Tyr Arg Cys Ile Cys₄₇₅ Pro Pro Gly Tyr Ala₄₈₀

Gly Asp His Cys Glu₄₈₅ Arg Asp Ile Asp Glu₄₉₀ Cys Ala Ser Asn Pro Cys₄₉₅

Leu Asn Gly Gly₅₀₀ His Cys Gln Asn Glu₅₀₅ Ile Asn Arg Phe Gln₅₁₀ Cys Leu

Cys Pro Thr₅₁₅ Gly Phe Ser Gly Asn₅₂₀ Leu Cys Gln Leu Asp₅₂₅ Ile Asp Tyr

Cys Glu₅₃₀ Pro Asn Pro Cys Gln₅₃₅ Asn Gly Ala Gln Cys₅₄₀ Tyr Asn Arg Ala

Ser Asp Tyr Phe Cys Lys₅₅₀ Cys Pro Glu Asp Tyr₅₅₅ Glu Gly Lys Asn Cys₅₆₀

Ser His Leu Lys Asp₅₆₅ His Cys Arg Thr Thr₅₇₀ Pro Cys Glu Val Ile₅₇₅ Asp

Ser Cys Thr Val₅₈₀ Ala Met Ala Ser Asn₅₈₅ Asp Thr Pro Glu Gly₅₉₀ Val Arg

Tyr Ile Ser₅₉₅ Ser Asn Val Cys Gly₆₀₀ Pro His Gly Lys Cys₆₀₅ Lys Ser Gln

Ser Gly₆₁₀ Gly Lys Phe Thr Cys₆₁₅ Asp Cys Asn Lys Gly₆₂₀ Phe Thr Gly Thr

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Tyr Cys His Glu Asn Ile Asn Asp Cys Glu Ser Asn Pro Cys Arg Asn
625 630 635 640

Gly Gly Thr Cys Ile Asp Gly Val Asn Ser Tyr Lys Cys Ile Cys Ser
645 650 655

Asp Gly Trp Glu Gly Ala Tyr Cys Glu Thr Asn Ile Asn Asp Cys Ser
660 665 670

Gln Asn Pro Cys His Asn Gly Gly Thr Cys Arg Asp Leu Val Asn Asp
675 680 685

Phe Tyr Cys Asp Cys Lys Asn Gly Trp Lys Gly Lys Thr Cys His Ser
690 695 700

Arg Asp Ser Gln Cys Asp Glu Ala Thr Cys Asn Asn Gly Gly Thr Cys
705 710 715 720

Tyr Asp Glu Gly Asp Ala Phe Lys Cys Met Cys Pro Gly Gly Trp Glu
725 730 735

Gly Thr Thr Cys Asn Ile Ala Arg Asn Ser Ser Cys Leu Pro Asn Pro
740 745 750

Cys His Asn Gly Gly Thr Cys Val Val Asn Gly Glu Ser Phe Thr Cys
755 760 765

Val Cys Lys Glu Gly Trp Glu Gly Pro Ile Cys Ala Gln Asn Thr Asn
770 775 780

Asp Cys Ser Pro His Pro Cys Tyr Asn Ser Gly Thr Cys Val Asp Gly
785 790 795 800

Asp Asn Trp Tyr Arg Cys Glu Cys Ala Pro Gly Phe Ala Gly Pro Asp
805 810 815

Cys Arg Ile Asn Ile Asn Glu Cys Gln Ser Ser Pro Cys Ala Phe Gly
820 825 830

Ala Thr Cys Val Asp Glu Ile Asn Gly Tyr Arg Cys Val Cys Pro Pro
835 840 845

Gly His Ser Gly Ala Lys Cys Gln Glu Val Ser Gly Arg Pro Cys Ile
850 855 860

Thr Met Gly Ser Val Ile Pro Asp Gly Ala Lys Trp Asp Asp Asp Cys
865 870 875 880

Asn Thr Cys Gln Cys Leu Asn Gly Arg Ile Ala Cys Ser Lys Val Trp
885 890 895

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Cys Gly Pro Arg Pro Cys Leu Leu His Lys Gly His Ser Glu Cys Pro
900 905 910

Ser Gly Gln Ser Cys Ile Pro Ile Leu Asp Asp Gln Cys Phe Val His
915 920 925

Pro Cys Thr Gly Val Gly Glu Cys Arg Ser Ser Ser Leu Gln Pro Val
930 935 940

Lys Thr Lys Cys Thr Ser Asp Ser Tyr Tyr Gln Asp Asn Cys Ala Asn
945 950 955 960

Ile Thr Phe Thr Phe Asn Lys Glu Met Met Ser Pro Gly Leu Thr Thr
965 970 975

Glu His Ile Cys Ser Glu Leu Arg Asn Leu Asn Ile Leu Lys Asn Val
980 985 990

Ser Ala Glu Tyr Ser Ile Tyr Ile Ala Cys Glu Pro Ser Pro Ser Ala
995 1000 1005

Asn Asn Glu Ile His Val Ala Ile Ser Ala Glu Asp Ile Arg Asp
1010 1015 1020

Asp Gly Asn Pro Ile Lys Glu Ile Thr Asp Lys Ile Ile Asp Leu
1025 1030 1035

Val Ser Lys Arg Asp Gly Asn Ser Ser Leu Ile Ala Ala Val Ala
1040 1045 1050

Glu Val Arg Val Gln Arg Arg Pro Leu Lys Asn Arg Thr Asp Phe
1055 1060 1065

Leu Val Pro Leu Leu Ser Ser Val Leu Thr Val Ala Trp Ile Cys
1070 1075 1080

Cys Leu Val Thr Ala Phe Tyr Trp Cys Leu Arg Lys Arg Arg Lys
1085 1090 1095

Pro Gly Ser His Thr His Ser Ala Ser Glu Asp Asn Thr Thr Asn
1100 1105 1110

Asn Val Arg Glu Gln Leu Asn Gln Ile Lys Asn Pro Ile Glu Lys
1115 1120 1125

His Gly Ala Asn Thr Val Pro Ile Lys Asp Tyr Glu Asn Lys Asn
1130 1135 1140

Ser Lys Met Ser Lys Ile Arg Thr His Asn Ser Glu Val Glu Glu
1145 1150 1155

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Asp Asp Met Asp Lys His Gln Gln Lys Ala Arg Phe Ala Lys Gln
1160 1165 1170

Pro Ala Tyr Thr Leu Val Asp Arg Glu Glu Lys Pro Pro Asn Gly
1175 1180 1185

Thr Pro Thr Lys His Pro Asn Trp Thr Asn Lys Gln Asp Asn Arg
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Gln Leu Ser Ala Leu Arg Asn Val Asn Gly Glu Leu Leu Ser Gly Ala
35 40 45

Cys Cys Asp Gly Asp Gly Arg Thr Thr Arg Ala Gly Gly Cys Gly His
50 55 60

Asp Glu Cys Asp Thr Tyr Val Arg Val Cys Leu Lys Glu Tyr Gln Ala
65 70 75 80

Lys Val Thr Pro Thr Gly Pro Cys Ser Tyr Gly His Gly Ala Thr Pro
85 90 95

Val Leu Gly Gly Asn Ser Phe Tyr Leu Pro Pro Ala Gly Ala Ala Gly
100 105 110

Asp Arg Ala Arg Ala Arg Ala Arg Ala Gly Gly Asp Gln Asp Pro Gly
115 120 125

Leu Val Val Ile Pro Phe Gln Phe Ala Trp Pro Arg Ser Phe Thr Leu
130 135 140

Ile Val Glu Ala Trp Asp Trp Asp Asn Asp Thr Thr Pro Asn Glu Glu
145 150 155 160

05164641 03101

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Arg	Trp	Lys	Ser	Leu	His	Phe	Ser	Gly	His	Val	Ala	His	Leu	Glu	Leu
			180					185					190		
Gln	Ile	Arg	Val	Arg	Cys	Asp	Glu	Asn	Tyr	Tyr	Ser	Ala	Thr	Cys	Asn
		195					200					205			
Lys	Phe	Cys	Arg	Pro	Arg	Asn	Asp	Phe	Phe	Gly	His	Tyr	Thr	Cys	Asp
	210					215					220				
Gln	Tyr	Gly	Asn	Lys	Ala	Cys	Met	Asp	Gly	Trp	Met	Gly	Lys	Glu	Cys
225					230					235					240
Lys	Glu	Ala	Val	Cys	Lys	Gln	Gly	Cys	Asn	Leu	Leu	His	Gly	Gly	Cys
				245					250					255	
Thr	Val	Pro	Gly	Glu	Cys	Arg	Cys	Ser	Tyr	Gly	Trp	Gln	Gly	Arg	Phe
			260					265					270		
Cys	Asp	Glu	Cys	Val	Pro	Tyr	Pro	Gly	Cys	Val	His	Gly	Ser	Cys	Val
		275					280					285			
Glu	Pro	Trp	Gln	Cys	Asn	Cys	Glu	Thr	Asn	Trp	Gly	Gly	Leu	Leu	Cys
	290					295					300				
Asp	Lys	Asp	Leu	Asn	Tyr	Cys	Gly	Ser	His	His	Pro	Cys	Thr	Asn	Gly
305					310					315					320
Gly	Thr	Cys	Ile	Asn	Ala	Glu	Pro	Asp	Gln	Tyr	Arg	Cys	Thr	Cys	Pro
				325					330					335	
Asp	Gly	Tyr	Ser	Gly	Arg	Asn	Cys	Glu	Lys	Ala	Glu	His	Ala	Cys	Thr
			340					345					350		
Ser	Asn	Pro	Cys	Ala	Asn	Gly	Gly	Ser	Cys	His	Glu	Val	Pro	Ser	Gly
		355					360					365			
Phe	Glu	Cys	His	Cys	Pro	Ser	Gly	Trp	Ser	Gly	Pro	Thr	Cys	Ala	Leu
	370					375					380				
Asp	Ile	Asp	Glu	Cys	Ala	Ser	Asn	Pro	Cys	Ala	Ala	Gly	Gly	Thr	Cys
385					390					395					400
Val	Asp	Gln	Val	Asp	Gly	Phe	Glu	Cys	Ile	Cys	Pro	Glu	Gln	Trp	Val
				405					410					415	
Gly	Ala	Thr	Cys	Gln	Leu	Asp	Ala	Asn	Glu	Cys	Glu	Gly	Lys	Pro	Cys
			420					425					430		

Leu Asn Ala Phe Ser Cys Lys Asn Leu Ile Gly Gly Tyr Tyr Cys Asp
 435 440 445

Cys Ile Pro Gly Trp Lys Gly Ile Asn Cys His Ile Asn Val Asn Asp
 450 455 460

Cys Arg Gly Gln Cys Gln His Gly Gly Thr Cys Lys Asp Leu Val Asn
 465 470 475 480

Gly Tyr Gln Cys Val Cys Pro Arg Gly Phe Gly Gly Arg His Cys Glu
 485 490 495

Leu Glu Arg Asp Lys Cys Ala Ser Ser Pro Cys His Ser Gly Gly Leu
 500 505 510

Cys Glu Asp Leu Ala Asp Gly Phe His Cys His Cys Pro Gln Gly Phe
 515 520 525

Ser Gly Pro Leu Cys Glu Val Asp Val Asp Leu Cys Glu Pro Ser Pro
 530 535 540

Cys Arg Asn Gly Ala Arg Cys Tyr Asn Leu Glu Gly Asp Tyr Tyr Cys
 545 550 555 560

Ala Cys Pro Asp Asp Phe Gly Gly Lys Asn Cys Ser Val Pro Arg Glu
 565 570 575

Pro Cys Pro Gly Gly Ala Cys Arg Val Ile Asp Gly Cys Gly Ser Asp
 580 585 590

Ala Gly Pro Gly Met Pro Gly Thr Ala Ala Ser Gly Val Cys Gly Pro
 595 600 605

His Gly Arg Cys Val Ser Gln Pro Gly Gly Asn Phe Ser Cys Ile Cys
 610 615 620

Asp Ser Gly Phe Thr Gly Thr Tyr Cys His Glu Asn Ile Asp Asp Cys
 625 630 635 640

Leu Gly Gln Pro Cys Arg Asn Gly Gly Thr Cys Ile Asp Glu Val Asp
 645 650 655

Ala Phe Arg Cys Phe Cys Pro Ser Gly Trp Glu Gly Glu Leu Cys Asp
 660 665 670

Thr Asn Pro Asn Asp Cys Leu Pro Asp Pro Cys His Ser Arg Gly Arg
 675 680 685

Cys Tyr Asp Leu Val Asn Asp Phe Tyr Cys Ala Cys Asp Asp Gly Trp
 690 695 700

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Lys Gly Lys Thr Cys His Ser Arg Glu Phe Gln Cys Asp Ala Tyr Thr
705 710 715 720

Cys Ser Asn Gly Gly Thr Cys Tyr Asp Ser Gly Asp Thr Phe Arg Cys
725 730 735

Ala Cys Pro Pro Gly Trp Lys Gly Ser Thr Cys Ala Val Ala Lys Asn
740 745 750

Ser Ser Cys Leu Pro Asn Pro Cys Val Asn Gly Gly Thr Cys Val Gly
755 760 765

Ser Gly Ala Ser Phe Ser Cys Ile Cys Arg Asp Gly Trp Glu Gly Arg
770 775 780

Thr Cys Thr His Asn Thr Asn Asp Cys Asn Pro Leu Pro Cys Tyr Asn
785 790 795 800

Gly Gly Ile Cys Val Asp Gly Val Asn Trp Phe Arg Cys Glu Cys Ala
805 810 815

Pro Gly Phe Ala Gly Pro Asp Cys Arg Ile Asn Ile Asp Glu Cys Gln
820 825 830

Ser Ser Pro Cys Ala Tyr Gly Ala Thr Cys Val Asp Glu Ile Asn Gly
835 840 845

Tyr Arg Cys Ser Cys Pro Pro Gly Arg Ala Gly Pro Arg Cys Gln Glu
850 855 860

Val Ile Gly Phe Gly Arg Ser Cys Trp Ser Arg Gly Thr Pro Phe Pro
865 870 875 880

His Gly Ser Ser Trp Val Glu Asp Cys Asn Ser Cys Arg Cys Leu Asp
885 890 895

Gly Arg Arg Asp Cys Ser Lys Val Trp Cys Gly Trp Lys Pro Cys Leu
900 905 910

Leu Ala Gly Gln Pro Glu Ala Leu Ser Ala Gln Cys Pro Leu Gly Gln
915 920 925

Arg Cys Leu Glu Lys Ala Pro Gly Gln Cys Leu Arg Pro Pro Cys Glu
930 935 940

Ala Trp Gly Glu Cys Gly Ala Glu Glu Pro Pro Ser Thr Pro Cys Leu
945 950 955 960

Pro Arg Ser Gly His Leu Asp Asn Asn Cys Ala Arg Leu Thr Leu His
965 970 975

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Phe Asn Arg Asp His Val Pro Gln Gly Thr Thr Val Gly Ala Ile Cys
 980 985 990

Ser Gly Ile Arg Ser Leu Pro Ala Thr Arg Ala Val Ala Arg Asp Arg
 995 1000 1005

Leu Leu Val Leu Leu Cys Asp Arg Ala Ser Ser Gly Ala Ser Ala
 1010 1015 1020

Val Glu Val Ala Val Ser Phe Ser Pro Ala Arg Asp Leu Pro Asp
 1025 1030 1035

Ser Ser Leu Ile Gln Gly Ala Ala His Ala Ile Val Ala Ala Ile
 1040 1045 1050

Thr Gln Arg Gly Asn Ser Ser Leu Leu Leu Ala Val Thr Glu Val
 1055 1060 1065

Lys Val Glu Thr Val Val Thr Gly Gly Ser Ser Thr Gly Leu Leu
 1070 1075 1080

Val Pro Val Leu Cys Gly Ala Phe Ser Val Leu Trp Leu Ala Cys
 1085 1090 1095

Val Val Leu Cys Val Trp Trp Thr Arg Lys Arg Arg Lys Glu Arg
 1100 1105 1110

Glu Arg Ser Arg Leu Pro Arg Glu Glu Ser Ala Asn Asn Gln Trp
 1115 1120 1125

Ala Pro Leu Asn Pro Ile Arg Asn Pro Ile Glu Arg Pro Gly Gly
 1130 1135 1140

His Lys Asp Val Leu Tyr Gln Cys Lys Asn Phe Thr Pro Pro Pro
 1145 1150 1155

Arg Arg Ala Asp Glu Ala Leu Pro Gly Pro Ala Gly His Ala Ala
 1160 1165 1170

Val Arg Glu Asp Glu Glu Asp Glu Asp Leu Gly Arg Gly Glu Glu
 1175 1180 1185

Asp Ser Leu Glu Ala Glu Lys Phe Leu Ser His Lys Phe Thr Lys
 1190 1195 1200

Asp Pro Gly Arg Ser Pro Gly Arg Pro Ala His Trp Ala Ser Gly
 1205 1210 1215

Pro Lys Val Asp Asn Arg Ala Val Arg Ser Ile Asn Glu Ala Arg
 1220 1225 1230

Tyr Val Gly Lys Glu
1235

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<212> PRT

<213> Homo sapiens

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20 25 30

Trp Ile Ser Arg His Lys Glu Met Thr Phe Ile Phe Thr Asp Gly Glu
35 40 45

Asp Glu Ala Leu Ala Arg His Thr Gly Asn Val Val Ile Thr Asn Cys
50 55 60

Ser Ala Ala His Ser Arg Gln Ala Leu Ser Cys Lys Met Ala Val Glu
65 70 75 80

Tyr Asp Arg Phe Ile Glu Ser Gly Arg Lys Trp Phe Cys His Val Asp
85 90 95

Asp Asp Asn Tyr Val Asn Leu Arg Ala Leu Leu Leu Leu Leu Ala Ser
100 105 110

Tyr Pro His Thr Leu Asp Val Tyr Val Gly Lys Pro Ser Leu Asp Arg
115 120 125

Pro Ile Gln Ala Met Glu Arg Val Ser Glu Asn Lys Val Arg Pro Val
130 135 140

His Phe Trp Phe Ala Thr Gly Gly Ala Gly Phe Cys Ile Ser Arg Gly
145 150 155 160

Leu Ala Leu Lys Met Ser Pro Trp Ala Ser Gly Gly His Phe Met Asn
165 170 175

Thr Ala Glu Arg Ile Arg Leu Pro Asp Asp Cys Thr Ile Gly Tyr Ile
180 185 190

Val Glu Ala Leu Leu Gly Val Pro Leu Ile Arg Ser Gly Leu Phe His
195 200 205

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Ser His Leu Glu Asn Leu Gln Gln Val Pro Thr Ser Glu Leu His Glu
210 215 220

Gln Val Thr Leu Ser Tyr Gly Met Phe Glu Asn Lys Arg Asn Ala Val
225 230 235 240

His Val Lys Gly Pro Phe Ser Val Glu Ala Asp Pro Ser Arg Trp Gly
245 250 255

Asn

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<212> PRT

<213> Homo sapiens

<400> 6

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Gln Arg Val Gln Gly Thr Pro Glu Leu Ser Gln Pro Asn Pro Gly Pro
35 40 45

Pro Lys Leu Gln Leu His Asp Val Phe Ile Ala Val Lys Thr Thr Arg
50 55 60

Ala Phe His Arg Leu Arg Leu Glu Leu Leu Leu Asp Thr Trp Val Ser
65 70 75 80

Arg Thr Arg Glu Leu Thr Phe Val Phe Thr Asp Ser Pro Asp Lys Gly
85 90 95

Leu Gln Glu Arg Leu Gly Ser His Leu Val Val Thr Asn Cys Ser Ala
100 105 110

Glu His Ser His Pro Ala Leu Ser Cys Lys Met Ala Ala Glu Phe Asp
115 120 125

Thr Phe Leu Ala Ser Gly Leu Arg Trp Phe Cys His Val Asp Asp Asp
130 135 140

Asn Tyr Val Asn Pro Arg Ala Leu Leu Gln Leu Leu Arg Ala Phe Pro
145 150 155 160

212583.ST25

Leu Ala Arg Asp Val Tyr Val Gly Arg Pro Ser Leu Asn Arg Pro Ile
165 170 175

His Ala Ser Glu Pro Gln Pro His Asn Arg Thr Arg Leu Val Gln Phe
180 185 190

Trp Phe Ala Thr Gly Gly Ala Gly Phe Cys Ile Asn Arg Lys Leu Ala
195 200 205

Leu Lys Met Ala Pro Trp Ala Ser Gly Ser Arg Phe Met Asp Thr Ser
210 215 220

Ala Leu Ile Arg Leu Pro Asp Asp Cys Thr Met Gly Tyr Ile Ile Glu
225 230 235 240

Cys Lys Leu Gly Gly Arg Leu Gln Pro Ser Pro Leu Phe His Ser His
245 250 255

Leu Glu Thr Leu Gln Leu Leu Arg Thr Ala Gln Leu Pro Glu Gln Val
260 265 270

Thr Leu Ser Tyr Gly Val Phe Glu Gly Lys Leu Asn Val Ile Lys Leu
275 280 285

Gln Gly Pro Phe Ser Pro Glu Glu Asp Pro Ser Arg Phe Arg Ser Leu
290 295 300

His Cys Leu Leu Tyr Pro Asp Thr Pro Trp Cys Pro Gln Leu Gly Ala
305 310 315 320

Arg

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<213> Homo sapiens

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20 25 30

Pro Ala Pro Ala Arg Thr Pro Ala Pro Ala Pro Arg Ala Pro Pro Ser
35 40 45

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212583.ST25

Arg Pro Ala Ala Pro Ser Leu Arg Pro Asp Asp Val Phe Ile Ala Val
50 55 60

Lys Thr Thr Arg Lys Asn His Gly Pro Arg Leu Arg Leu Leu Leu Arg
65 70 75 80

Thr Trp Ile Ser Arg Ala Arg Gln Gln Thr Phe Ile Phe Thr Asp Gly
85 90 95

Asp Asp Pro Glu Leu Glu Leu Gln Gly Gly Asp Arg Val Ile Asn Thr
100 105 110

Asn Cys Ser Ala Val Arg Thr Arg Gln Ala Leu Cys Cys Lys Met Ser
115 120 125

Val Glu Tyr Asp Lys Phe Ile Glu Ser Gly Arg Lys Trp Phe Cys His
130 135 140

Val Asp Asp Asp Asn Tyr Val Asn Ala Arg Ser Leu Leu His Leu Leu
145 150 155 160

Ser Ser Phe Ser Pro Ser Gln Asp Val Tyr Leu Gly Arg Pro Ser Leu
165 170 175

Asp His Pro Ile Glu Ala Thr Glu Arg Val Gln Gly Gly Arg Thr
180 185 190

<210> 8

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<212> PRT

<213> Drosophila melanogaster

<400> 8

Met Phe Arg Lys His Phe Arg Arg Lys Pro Ala Thr Ser Ser Ser Leu
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Glu Ser Thr Ile Glu Ser Ala Asp Ser Leu Gly Met Ser Lys Lys Thr
20 25 30

Ala Thr Lys Arg Gln Arg Pro Arg His Arg Val Pro Lys Ile Ala Thr
35 40 45

Leu Pro Ser Thr Ile Arg Asp Cys Arg Ser Leu Lys Ser Ala Cys Asn
50 55 60

Leu Ile Ala Leu Ile Leu Ile Leu Leu Val His Lys Ile Ser Ala Ala
65 70 75 80

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Gly Asn Phe Glu Leu Glu Ile Leu Glu Ile Ser Asn Thr Asn Ser His
85 90 95

Leu Leu Asn Gly Tyr Cys Cys Gly Met Pro Ala Glu Leu Arg Ala Thr
100 105 110

Lys Thr Ile Gly Cys Ser Pro Cys Thr Thr Ala Phe Arg Leu Cys Leu
115 120 125

Lys Glu Tyr Gln Thr Thr Glu Gln Gly Ala Ser Ile Ser Thr Gly Cys
130 135 140

Ser Phe Gly Asn Ala Thr Thr Lys Ile Leu Gly Gly Ser Ser Phe Val
145 150 155 160

Leu Ser Asp Pro Gly Val Gly Ala Ile Val Leu Pro Phe Thr Phe Arg
165 170 175

Trp Thr Lys Ser Phe Thr Leu Ile Leu Gln Ala Leu Asp Met Tyr Asn
180 185 190

Thr Ser Tyr Pro Asp Ala Glu Arg Leu Ile Glu Glu Thr Ser Tyr Ser
195 200 205

Gly Val Ile Leu Pro Ser Pro Glu Trp Lys Thr Leu Asp His Ile Gly
210 215 220

Arg Asn Ala Arg Ile Thr Tyr Arg Val Arg Val Gln Cys Ala Val Thr
225 230 235 240

Tyr Tyr Asn Thr Thr Cys Thr Thr Phe Cys Arg Pro Arg Asp Asp Gln
245 250 255

Phe Gly His Tyr Ala Cys Gly Ser Glu Gly Gln Lys Leu Cys Leu Asn
260 265 270

Gly Trp Gln Gly Val Asn Cys Glu Glu Ala Ile Cys Lys Ala Gly Cys
275 280 285

Asp Pro Val His Gly Lys Cys Asp Arg Pro Gly Glu Cys Glu Cys Arg
290 295 300

Pro Gly Trp Arg Gly Pro Leu Cys Asn Glu Cys Met Val Tyr Pro Gly
305 310 315 320

Cys Lys His Gly Ser Cys Asn Gly Ser Ala Trp Lys Cys Val Cys Asp
325 330 335

Thr Asn Trp Gly Gly Ile Leu Cys Asp Gln Asp Leu Asn Phe Cys Gly
340 345 350

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Thr His Glu Pro Cys Lys His Gly Gly Thr Cys Glu Asn Thr Ala Pro
355 360 365

Asp Lys Tyr Arg Cys Thr Cys Ala Glu Gly Leu Ser Gly Glu Gln Cys
370 375 380

Glu Ile Val Glu His Pro Cys Ala Thr Arg Pro Cys Arg Asn Gly Gly
385 390 395 400

Thr Cys Thr Leu Lys Thr Ser Asn Arg Thr Gln Ala Gln Val Tyr Arg
405 410 415

Thr Ser His Gly Arg Ser Asn Met Gly Arg Pro Val Arg Arg Ser Ser
420 425 430

Ser Met Arg Ser Leu Asp His Leu Arg Pro Glu Gly Gln Ala Leu Asn
435 440 445

Gly Ser Ser Ser Ser Gly Leu Val Ser Leu Gly Ser Leu Gln Leu Gln
450 455 460

Gln Gln Leu Ala Pro Asp Phe Thr Cys Asp Cys Ala Ala Gly Trp Thr
465 470 475 480

Gly Pro Thr Cys Glu Ile Asn Ile Asp Glu Cys Ala Gly Gly Pro Cys
485 490 495

Glu His Gly Gly Thr Cys Ile Asp Leu Ile Gly Gly Phe Arg Cys Glu
500 505 510

Cys Pro Pro Glu Trp His Gly Asp Val Cys Gln Val Asp Val Asn Glu
515 520 525

Cys Glu Ala Pro His Ser Ala Gly Ile Ala Ala Asn Ala Leu Leu Thr
530 535 540

Thr Thr Ala Thr Ala Ile Ile Gly Ser Asn Leu Ser Ser Thr Ala Leu
545 550 555 560

Leu Ala Ala Leu Thr Ser Ala Val Ala Ser Thr Ser Leu Ala Ile Gly
565 570 575

Pro Cys Ile Asn Ala Lys Glu Cys Arg Asn Gln Pro Gly Ser Phe Ala
580 585 590

Cys Ile Cys Lys Glu Gly Trp Gly Gly Val Thr Cys Ala Glu Asn Leu
595 600 605

Asp Asp Cys Val Gly Gln Cys Arg Asn Gly Ala Thr Cys Ile Asp Leu
610 615 620

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Val Asn Asp Tyr Arg Cys Ala Cys Ala Ser Gly Phe Thr Gly Arg Asp
625 630 635 640

Cys Glu Thr Asp Ile Asp Glu Cys Ala Thr Ser Pro Cys Arg Asn Gly
645 650 655

Gly Glu Cys Val Asp Met Val Gly Lys Phe Asn Cys Ile Cys Pro Leu
660 665 670

Gly Tyr Ser Gly Ser Leu Cys Glu Glu Ala Lys Glu Asn Cys Thr Pro
675 680 685

Ser Pro Cys Leu Glu Gly His Cys Leu Asn Thr Pro Glu Gly Tyr Tyr
690 695 700

Cys His Cys Pro Pro Asp Arg Ala Gly Lys His Cys Glu Gln Leu Arg
705 710 715 720

Pro Leu Cys Ser Gln Pro Pro Cys Asn Glu Gly Cys Phe Ala Asn Val
725 730 735

Ser Leu Ala Thr Ser Ala Thr Thr Thr Thr Thr Thr Thr Thr Ala
740 745 750

Thr Thr Thr Arg Lys Met Ala Lys Pro Ser Gly Leu Pro Cys Ser Gly
755 760 765

His Gly Ser Cys Glu Met Ser Asp Val Gly Thr Phe Cys Lys Cys His
770 775 780

Val Gly His Thr Gly Thr Phe Cys Glu His Asn Leu Asn Glu Cys Ser
785 790 795 800

Pro Asn Pro Cys Arg Asn Gly Gly Ile Cys Leu Asp Gly Asp Gly Asp
805 810 815

Phe Thr Cys Glu Cys Met Ser Gly Trp Thr Gly Lys Arg Cys Ser Glu
820 825 830

Arg Ala Thr Gly Cys Tyr Ala Gly Gln Cys Gln Asn Gly Gly Thr Cys
835 840 845

Met Pro Gly Ala Pro Asp Lys Ala Leu Gln Pro His Cys Arg Cys Ala
850 855 860

Pro Gly Trp Thr Gly Leu Phe Cys Ala Glu Ala Ile Asp Gln Cys Arg
865 870 875 880

Gly Gln Pro Cys His Asn Gly Gly Thr Cys Glu Ser Gly Ala Gly Trp
885 890 895

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Phe Arg Cys Val Cys Ala Gln Gly Phe Ser Gly Pro Asp Cys Arg Ile
 900 905 910
 Asn Val Asn Glu Cys Ser Pro Gln Pro Cys Gln Gly Gly Ala Thr Cys
 915 920 925
 Ile Asp Gly Ile Gly Gly Tyr Ser Cys Ile Cys Pro Pro Gly Arg His
 930 935 940
 Gly Leu Arg Cys Glu Ile Leu Leu Ser Asp Pro Lys Ser Ala Cys Gln
 945 950 955 960
 Asn Ala Ser Asn Thr Ile Ser Pro Tyr Thr Ala Leu Asn Arg Ser Gln
 965 970 975
 Asn Trp Leu Asp Ile Ala Leu Thr Gly Arg Thr Glu Asp Asp Glu Asn
 980 985 990
 Cys Asn Ala Cys Val Cys Glu Asn Gly Thr Ser Arg Cys Thr Asn Leu
 995 1000 1005
 Trp Cys Gly Leu Pro Asn Cys Tyr Lys Val Asp Pro Leu Ser Lys
 1010 1015 1020
 Ser Ser Asn Leu Ser Gly Val Cys Lys Gln His Glu Val Cys Val
 1025 1030 1035
 Pro Ala Leu Ser Glu Thr Cys Leu Ser Ser Pro Cys Asn Val Arg
 1040 1045 1050
 Gly Asp Cys Arg Ala Leu Glu Pro Ser Arg Arg Val Ala Pro Pro
 1055 1060 1065
 Arg Leu Pro Ala Lys Ser Ser Cys Trp Pro Asn Gln Ala Val Val
 1070 1075 1080
 Asn Glu Asn Cys Ala Arg Leu Thr Ile Leu Leu Ala Leu Glu Arg
 1085 1090 1095
 Val Gly Lys Gly Ala Ser Val Glu Gly Leu Cys Ser Leu Val Arg
 1100 1105 1110
 Val Leu Leu Ala Ala Gln Leu Ile Lys Lys Pro Ala Ser Thr Phe
 1115 1120 1125
 Gly Gln Asp Pro Gly Met Leu Met Val Leu Cys Asp Leu Lys Thr
 1130 1135 1140
 Gly Thr Asn Asp Thr Val Glu Leu Thr Val Ser Ser Ser Lys Leu
 1145 1150 1155

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Asn Asp Pro Gln Leu Pro Val Ala Val Gly Leu Leu Gly Glu Leu
 1160 1165 1170
 Leu Ser Ser Arg Gln Leu Asn Gly Ile Gln Arg Arg Lys Glu Leu
 1175 1180 1185
 Glu Leu Gln His Ala Lys Leu Ala Ala Leu Thr Ser Ile Val Glu
 1190 1195 1200
 Val Lys Leu Glu Thr Ala Arg Val Ala Asp Gly Ser Gly His Ser
 1205 1210 1215
 Leu Leu Ile Gly Val Leu Cys Gly Val Phe Ile Val Leu Val Gly
 1220 1225 1230
 Phe Ser Val Phe Ile Ser Leu Tyr Trp Lys Gln Arg Leu Ala Tyr
 1235 1240 1245
 Arg Thr Ser Ser Gly Met Asn Leu Thr Pro Ser Leu Asp Ala Leu
 1250 1255 1260
 Arg His Glu Glu Glu Lys Ser Asn Asn Leu Gln Asn Glu Glu Asn
 1265 1270 1275
 Leu Arg Arg Tyr Thr Asn Pro Leu Lys Gly Ser Thr Ser Ser Leu
 1280 1285 1290
 Arg Ala Ala Thr Gly Met Glu Leu Ser Leu Asn Pro Ala Pro Glu
 1295 1300 1305
 Leu Ala Ala Ser Ala Ala Ser Ser Ser Ala Leu His Arg Ser Gln
 1310 1315 1320
 Pro Leu Phe Pro Pro Cys Asp Phe Glu Arg Glu Leu Asp Ser Ser
 1325 1330 1335
 Thr Gly Leu Lys Gln Ala His Lys Arg Ser Ser Gln Ile Leu Leu
 1340 1345 1350
 His Lys Thr Gln Asn Ser Asp Met Arg Lys Asn Thr Val Gly Ser
 1355 1360 1365
 Leu Asp Ser Pro Arg Lys Asp Phe Gly Lys Arg Ser Ile Asn Cys
 1370 1375 1380
 Lys Ser Met Pro Pro Ser Ser Gly Asp Glu Gly Ser Asp Val Leu
 1385 1390 1395
 Ala Thr Thr Val Met Val
 1400

<210> 9
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> JAG-1b Notch ligand
 <220>
 <221> misc_feature
 <223> JAG-1c Notch ligand

<400> 9
 Ala Asp Asp Tyr Tyr Tyr Gly Phe Gly Ala Asn Lys Phe Gly Arg Pro
 1 5 10 15

Arg

<210> 10
 <211> 21
 <212> PRT
 <213> artificial/unknown

<220>
 <221> misc_feature
 <223> JAG-1c Notch ligand

<400> 10
 Ala Asp Asp Tyr Tyr Tyr Gly Phe Gly Ala Asn Lys Phe Gly Arg Pro
 1 5 10 15

Arg Asp Asp Phe Phe
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<210> 11
 <211> 17
 <212> PRT
 <213> artificial/unknown

<220>

<221> misc_feature

<223> JAG-1 Notch ligand

<400> 11

Cys Asp Asp Tyr Tyr Tyr Gly Phe Gly Cys Asn Lys Phe Cys Arg Pro
 1 5 10 15

Arg

<210> 12

<211> 19

<212> PRT

<213> artificial/unknown

<220>

<221> misc_feature

<223> r-JAG1 Notch ligand

<400> 12

Cys Asp Asp Tyr Tyr Tyr Gly Phe Gly Cys Asn Lys Phe Gly Arg Pro
 1 5 10 15

Arg Asp Asp

<210> 13

<211> 17

<212> PRT

<213> artificial/unknown

<220>

<221> misc_feature

<223> Scrambled JAG peptide

<400> 13

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Arg Cys Gly Pro Asp Cys Phe Asp Asn Tyr Gly Arg Tyr Lys Tyr Cys
1 5 10 15

Phe

<210> 14

<211> 22

<212> DNA

<213> artificial/unknown

<220>

<221> misc_feature

<223> NF kappa B oligonucleotide

<400> 14
agttgagggg actttcccag gc

22

<210> 15

<211> 282

<212> DNA

<213> Artificial/Unknown

<220>

<221> misc_feature

<223> Human Notch repeats 11-12 - a Notch antagnoist polypeptide

<220>

<221> exon

<222> (1)..(282)

<223>

<220>

<221> misc_feature

<222> (1)..(33)

<223> encodes a tag that is dispensible for Notch antagnoistic activity

0 1 2 3 4 5 6 7 8 9

<400> 16

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Met Ala Ala Glu Phe His His His His His His Gln Asp Val Asp Glu
1 5 10 15

Cys Ser Leu Gly Ala Asn Pro Cys Glu His Ala Gly Lys Cys Ile Asn
20 25 30

Thr Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln Gly Tyr Thr Gly Pro
35 40 45

Arg Cys Glu Ile Asp Val Asn Glu Cys Val Ser Asn Pro Cys Gln Asn
50 55 60

Asp Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe Gln Cys Met Cys Met
65 70 75 80

Pro Gly Tyr Glu Gly Val His Cys Glu Val Asn Thr
85 90

<210> 17

<211> 249

<212> DNA

<213> Artificial/Unknown

<220>

<221> exon

<222> (1)..(249)

<223> Encodes human Notch repeats 11-12

<400> 17	
cag gac gtg gat gag tgc tcg ctg ggt gcc aac ccc tgc gag cat gcg	48
Gln Asp Val Asp Glu Cys Ser Leu Gly Ala Asn Pro Cys Glu His Ala	
1 5 10 15	
ggc aag tgc atc aac acg ctg ggc tcc ttc gag tgc cag tgt ctg cag	96
Gly Lys Cys Ile Asn Thr Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln	
20 25 30	
ggc tac acg ggc ccc cga tgc gag atc gac gtc aac gag tgc gtc tcg	144
Gly Tyr Thr Gly Pro Arg Cys Glu Ile Asp Val Asn Glu Cys Val Ser	
35 40 45	
aac ccg tgc cag aac gac gcc acc tgc ctg gac cag att ggg gag ttc	192
Asn Pro Cys Gln Asn Asp Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe	
50 55 60	
cag tgc atg tgc atg ccc ggc tac gag ggt gtg cac tgc gag gtc aac	240
Gln Cys Met Cys Met Pro Gly Tyr Glu Gly Val His Cys Glu Val Asn	
65 70 75 80	
aca tga tga	249
Thr	

<210> 18

<211> 81

<212> PRT

<213> Artificial/Unknown

<220>

<221> misc

<222> (1)..(81)

<223> Human Notch repeats 11 and 12 - functions as Notch antagonist

<400> 18

Gln Asp Val Asp Glu Cys Ser Leu Gly Ala Asn Pro Cys Glu His Ala
 1 5 10 15

Gly Lys Cys Ile Asn Thr Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln
 20 25 30

Gly Tyr Thr Gly Pro Arg Cys Glu Ile Asp Val Asn Glu Cys Val Ser
 35 40 45

Asn Pro Cys Gln Asn Asp Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe
 50 55 60

Gln Cys Met Cys Met Pro Gly Tyr Glu Gly Val His Cys Glu Val Asn
 65 70 75 80

Thr

101100 6484660